

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2005/000153

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
Int. Cl. <sup>7</sup> : E02F5/12, 5/10, E02D 17/12		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Dwpi: E02D, E02F with keywords: (trench+, ditch+, disc+, disk+, wheel+, roller+, compact+, level+, frame+, fill+, backfill+, box+)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 4723870 A (MARTINEZ) 9 February 1988 The whole document	1-4 10-14
X Y	US 5479728 A (DEKEN et al) 2 January 1996 The whole document	1-4 10-14
X Y	US 4913581 A (WEILER) 3 April 1990 The whole document	1-4 10-14
X Y	FR 2653464 A1 (MARKARIAN) 26 April 1991 The whole document	1-4 10-14
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&amp;" document member of the same patent family</p>		
Date of the actual completion of the international search 10 March 2005		Date of mailing of the international search report 16 MAR 2005
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929		Authorized officer  LEOPOLD FILIPOVIC Telephone No : (02) 6283 2105

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	AU 18827/2002 A1 (MITCHELL PACIFIC PTY. LTD.) 10 October 2002 The whole document	5-9 10-14
X Y	WO 1997/044532 A1 (WIKER) 27 November 1997 The whole document	5-9 10-14
X Y	US 4289424 A (SHEFBUCH et al) 15 September 1981 The whole document	5-9 10-14

**Supplemental Box**

(To be used when the space in any of Boxes I to VIII is not sufficient)

**Continuation of Box No II:**

The international application does not comply with the requirements of unity of invention because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept. In coming to this conclusion the International Searching Authority has found that there are different inventions as follows:

1. Claims 1-4 relate to the apparatus for compacting fine particulate earth or sand material around an elongate member laid in a trench. It is considered that the feature of the apparatus including at least one disc member having a plurality of teeth like formations around its periphery and mount means for the at least one disc member permitting the disc member to roll through the fine particulate material comprises a first "special technical feature".
2. Claims 5-9 are directed to the equipment for spreading and levelling fine particulate earth or sand material already deposited in the base region of a preformed trench. It is considered that the feature of the equipment including cross brace means for maintaining spacing of the side walls and wall means closing a cross-sectional zone of the equipment between the side walls having a lower edge adapted to provide a level surface to the fine particulate material spread by the side wall means comprises a second special technical feature.

Since the above-mentioned groups of claims do not share any of the technical features identified a "technical relationship" between the inventions, as defined in PCT rule 13.2, does not exist. Accordingly the international application does not relate to one invention or to a single inventive concept, a priori.

Claims 10-14 are directed to a method of laying and embedding a pipeline or similar elongate member in a trench, the method including the steps of using both the apparatus for compacting fine particulate earth or sand material around an elongate member laid in a trench and the equipment for spreading and levelling fine particulate earth or sand material already deposited in the base region of a preformed trench. These claims may therefore in essence be grouped with either claims 1-4 or claims 5-9.

**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

**Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as indicated on an extra sheet.

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
US	4723870				
US	5479728				
US	4913581	CA	2013584		
FR	2653464				
AU	1882702	AU	18827/02		
WO	9744532	AU	63205/96	CA	2255954
		NO	950086	NZ	332948
				EP	0900303
				PL	330043
US	4289424				
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.					
END OF ANNEX					